

Railway Flat Floating Connectors

- Railway flat floating connector
- Modularity mixed power, signal & coaxial contacts.
- Up to 70 signal contacts.
- Guiding pins.
- Rack/Panel applications (norm XPF61-005)
- One size only: 14 units (5.5mm)
- In compliance with NF F 61-032, SNCF norm approved.

Technical Characteristics

MATERIALS AND PLATINGS

Frame	Soft Steel (Zinc coated)
Side flange	Polycarbonate
Insulator	Polycarbonate
Pin & socket body	Brass, Au/Ni
Socket wires	Copper alloy, Au/Ni
Pin	Au/Ni
Floating eyelets	Brass (Ni plated)

ENVIRONMENTAL

Temperature range	- 40 °C to 100 °C
Fire classification	Exigence 2 following NF F 16-102
Salt spray test	96 hours
Acid withstanding	Following NF F 61-032 par. 11.4.6
Vibration Withstanding	5 g /25 to 250 Hz
Insulator mechanical resistance	1000 N
Max torque for auto threading screws	75 Ncm

ELECTRICAL CHARACTERISTICS

Contact Ø	Ø 1.50	Ø 2.50	Ø 3.50
Creepage distance	1.85 mm	2.25 mm	4.05 mm
Clearance distance	1.25 mm	3.40 mm	5.40 mm
Working current	8 A	16 A	25 A
Insulation resistance	≥ 5.10 ³ MΩ		
Contact resistance	≤ 2.50 mΩ	≤ 1.00 mΩ	≤ 0.80 mΩ
Dielectric withstanding voltage	1500 Vrms	2000 Vrms	3000 Vrms
Contact Ø	Ø 1.50	Ø 2.50	Ø 3.50
Voltage rating	110 V	220 V	220 V
Contact holding back in the module	40 N	50 N	70 N
Maxi male contact mass	1.10 g	2.90 g	4.90 g
Maxi female contact mass	0.70 g	1.60 g	2.70 g
IF/SF* (Max value)	1.60N	9.00N	10.00N

*IF/SF: Insertion and separation force according to NF F 61-032

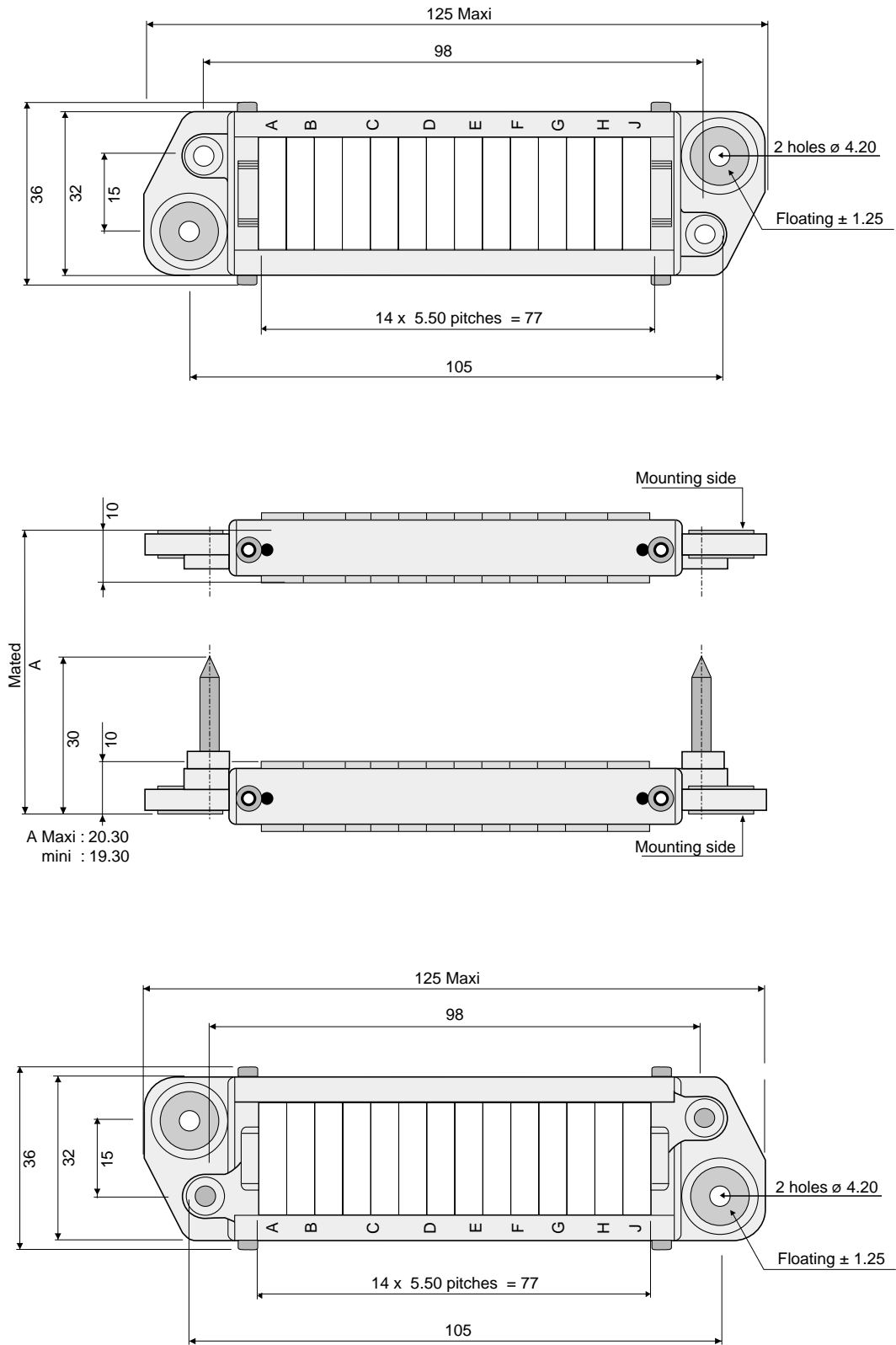
Ordering information

		L	H	S	---	--	--	14	
SERIES									
MODEL									
S	MARKED FRAME*								
LAYOUT(consult the facyory)									
Always receptacle P/N to use		Ex. : 102							
Layouts included L/RH									
Normalized	102	104	108	120	130	147			
Other	101	to		1--					
Layouts included L/ZH									
Normalized	302	320							
Other	301	to		3--					
PART - POLARITY									
01	Plug delivered without contact								
11**	Male plug delivered with contacts								
02	Receptacle delivered without contact								
20**	Female receptacle delivered with contacts								
TERMINATION STYLES									
00	Wthout contact	51	Wire wrap <input type="checkbox"/> 0.6						
20	Crimp termination	56	Wire wrap <input type="checkbox"/> 1						
30	Straight termination	62	Post termination						
14	PITCH NUMBER								

* Only normalized layouts are marked with NF N 61-032

** Only for non normalized layouts

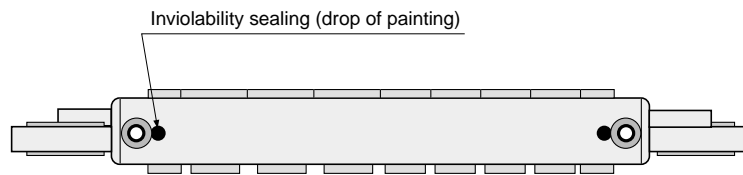
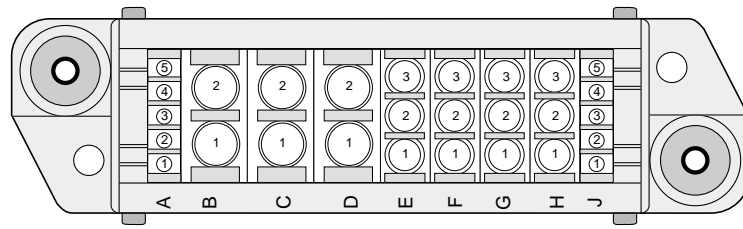
Plug & receptacle dimensions



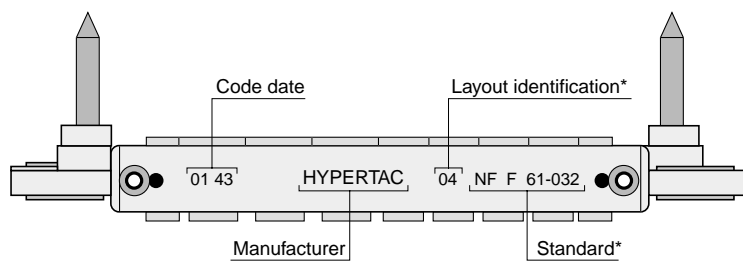
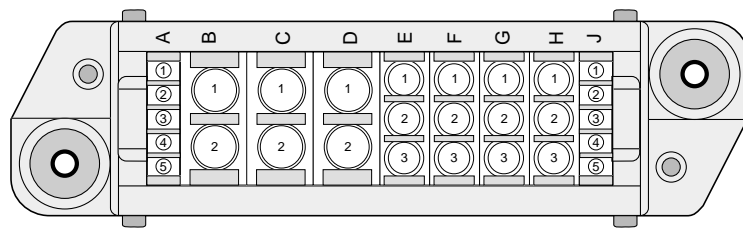
Dimensions are in mm

Mounting exemple with L/RHA, L/UH, L/VM and L/VF modules

Receptacle cabling side view



Plug cabling side view

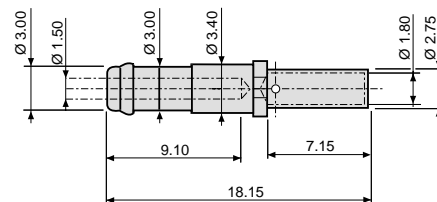
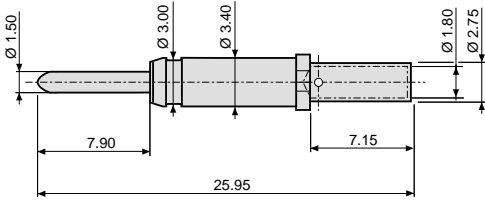


Contacts - crimp terminations

Males

Females

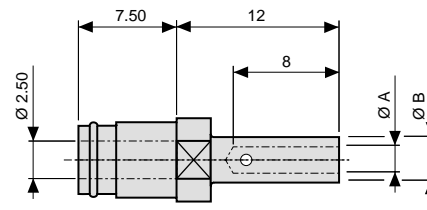
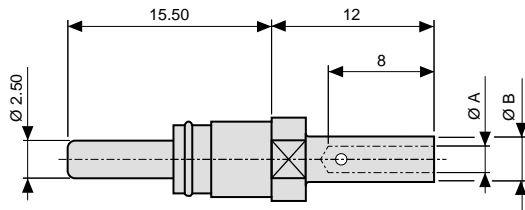
Contacts Ø 1.50 AWG 24-22-20-18-16-14



Ref: 0150 761-20-OG

Ref: 0150 682-20-G1

Contacts Ø 2.50*



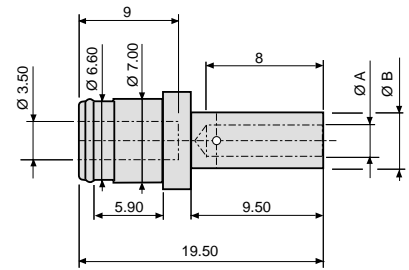
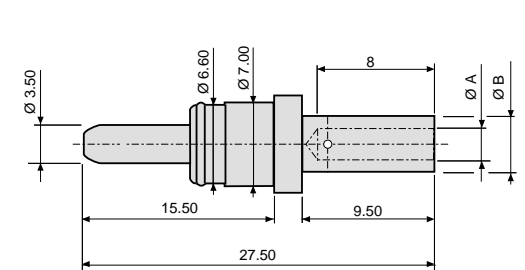
Ref: 0250 181-22-OG

Ref: 0250 201-23-OG

Ref: 0250 172-22-G1

Ref: 0250 202-23-G1

Contacts Ø 3.50*



Ref: 0350 111-24-OG

Ref: 0350 121-25-OG

Ref: 0350 131-26-OG

Ref: 0350 251-23-OG

Ref: 0350 112-24-G1

Ref: 0350 122-25-G1

Ref: 0350 132-26-G1

Ref: 0350 302-23-G1

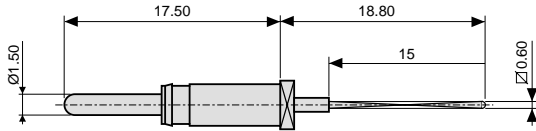
Reference	Ø A	Ø B	*AWG
Ø 2.50			
0250 181-22-OG	1.95	3.10	16-14
0250 172-22-G1			
0250 201-23-OG	1.50	3.10	22-20-18-16
0250 202-23-G1			
Ø 3.50			
0350 111-24-OG	2.10	4.10	14-13
0350 112-24-G1			
0350 121-25-OG	1.95	3.10	16-14
0350 122-25-G1			
0350 131-26-OG	1.50	3.10	22-17
0350 132-26-G1			
0350 251-23-OG	4.55	5.65	8
0350 302-23-G1			

Dimensions are in mm

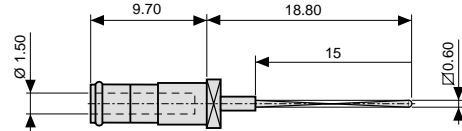
Contacts Ø 1.50 - Wire wrap termination

Males

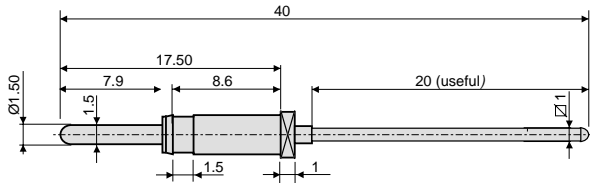
Females



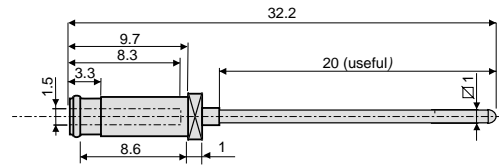
Ref: 0151 131-51-OG



Ref: 0151 132-51-G1

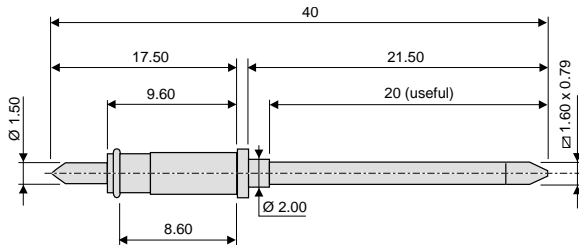


Ref: 0151 151-56-OG

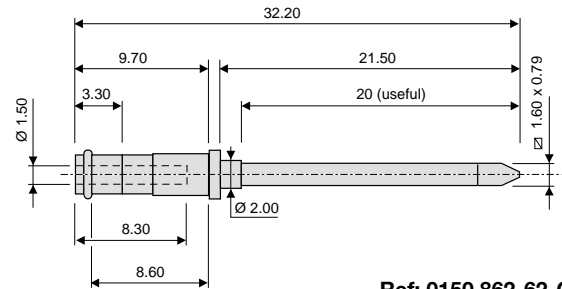


Ref: 0151 152-56-G1

Contact Ø 1.50 - Post termination

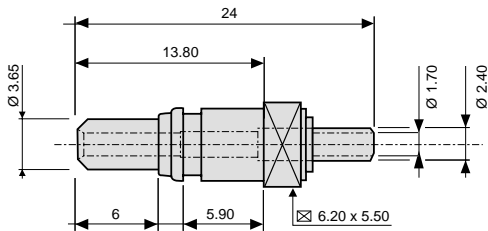


Ref: 0150 861-62-OG

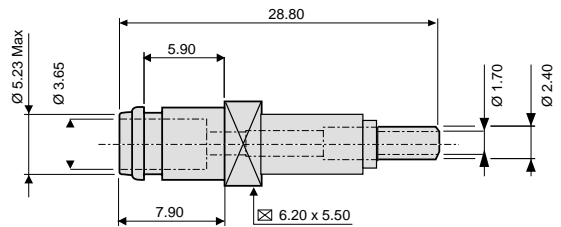


Ref: 0150 862-62-G1

Coaxial contacts



Ref: 0370 031-XB-U1



Ref: 0370 032-XB-U1

TECHNICAL CHARACTERISTICS

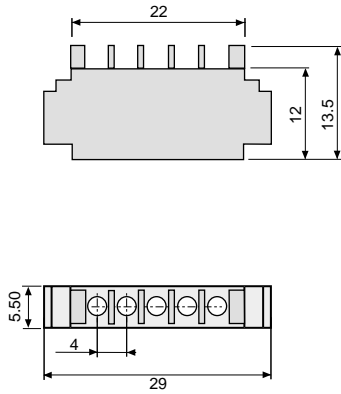
Impedance	cable KX22A (RG316) : 50 Ω, câble RG179B/U : 75 Ω	
Curent rating	3 A	
Contact resistance	Internal ≤ 10 milliΩ	External ≤ 0.8 milliΩ
Insulation resistance	> 5.10 ³ MΩ (500VDC)	
Temperature range	-40 °C + 100 °C	
Contact life cycle	> 5000	
Standing wave ratio up to	1.2 (500 MHz)	

Dimensions are in mm

Modules

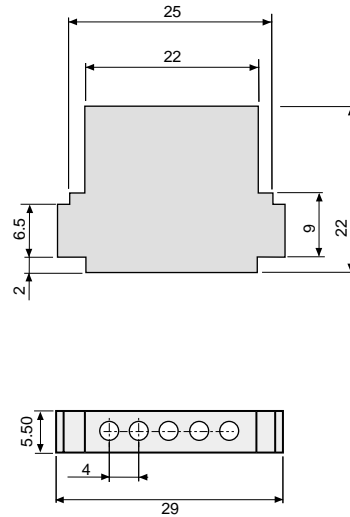
5 x Ø 1.50

L/RH



Ref: L-- 515 00 00 RHA

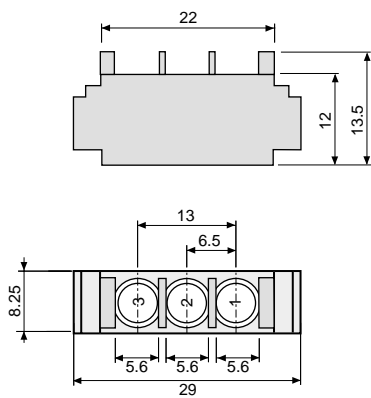
L/ZH



Ref: L -- 515 00 00 ZHA

3 x Ø 2.50

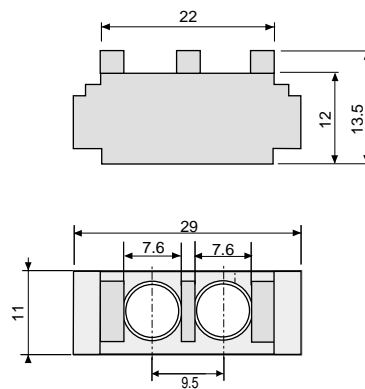
L/SH



Ref: L-- 325 00 00 SH

2 x Ø 3.50

L/UH



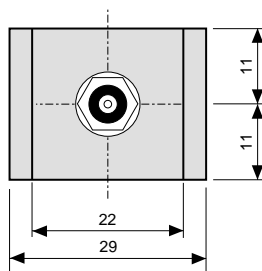
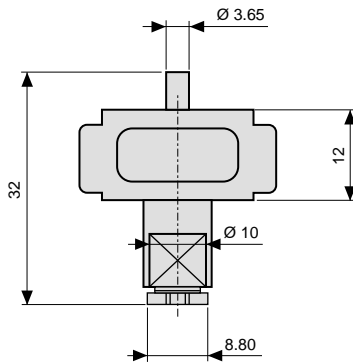
Ref: L-- 235 00 00 UH

Dimensions are in mm

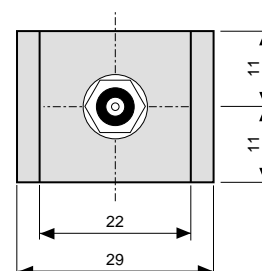
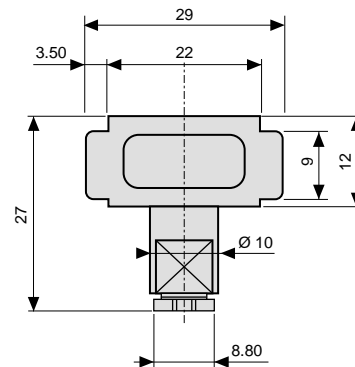
Modules

Modules equipped with contacts for KX15 coax cable

L/VM



L/VF



Ref: L-- 1CX 11 40 VM

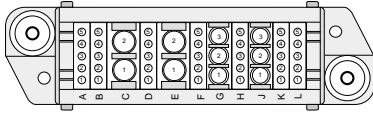
Ref: L -- 1CX 20 40 VF

TECHNICAL CHARACTERISTICS

Impedance	50 Ω	Dielectric withstanding voltage internal 1000 Vrms external 4800 Vrms	
Curent rating	2 A	Temperature range	-40 °C + 100 °C
Contact resistance	Internal ≤ 10 milliΩ External ≤ 1 milliΩ	Module pitches number	4 as 22 mm
Insulation resistance	> 5.10 ⁴ MΩ (500 VDC)	Recommended cable	KX15

Layouts

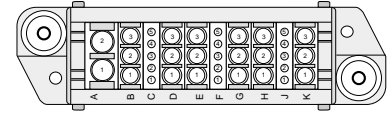
Layouts including Ø 1.50 mm contacts are equipped with L/ZH modules.



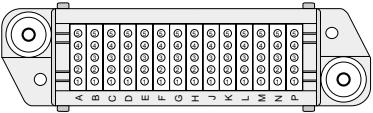
Ref: 201/301 7 modules L/ZH
2 modules L/SH
2 modules L/UH



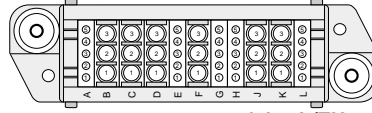
Ref: 209/309 11 modules L/ZH
12 modules L/SH



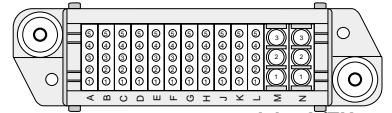
Ref: 219/319 3 modules L/ZH
6 modules L/SH
1 module L/UH



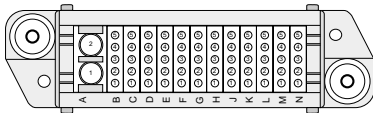
Ref: 202/302 14 modules L/ZH



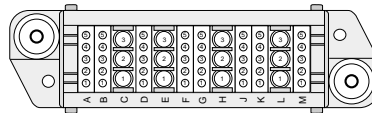
Ref: 210/310 5 modules L/ZH
6 modules L/SH



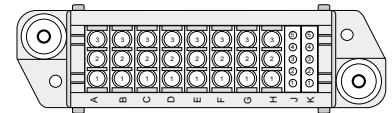
Ref: 220/320 11 modules L/ZH
12 modules L/SH



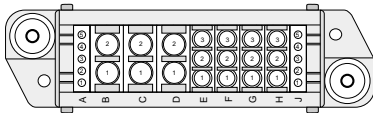
Ref: 203/303 12 modules L/ZH
11 module L/UH



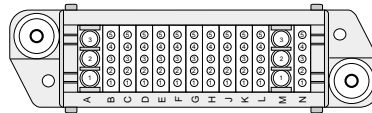
Ref: 211/311 8 modules L/ZH
4 modules L/SH



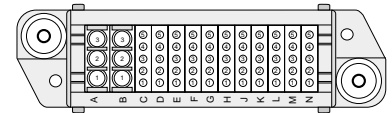
Ref: 222/322 2 modules L/ZH
8 modules L/SH



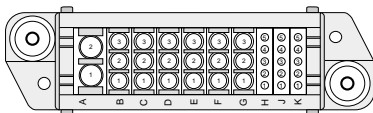
Ref: 204/304 2 modules L/ZH
4 modules L/SH
3 modules L/UH



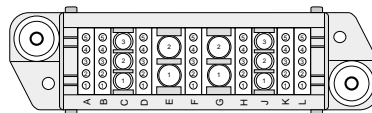
Ref: 212/312 11 modules L/ZH
12 modules L/SH



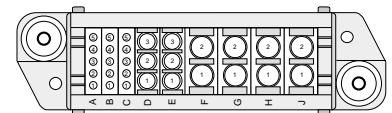
Ref: 223/323 11 modules L/ZH
12 modules L/SH



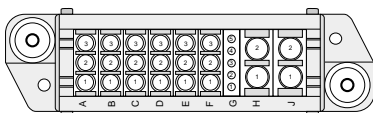
Ref: 205/305 3 modules L/ZH
6 modules L/SH
1 module L/UH



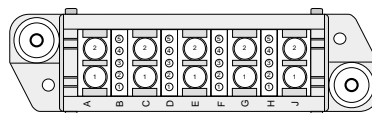
Ref: 213/313 7 modules L/ZH
2 modules L/SH
2 modules L/UH



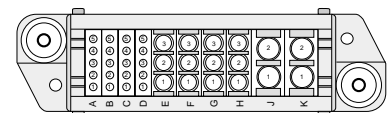
Ref: 224/324 3 modules L/ZH
2 modules L/SH
4 modules L/UH



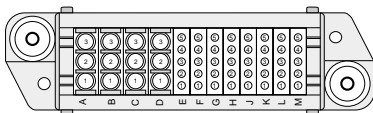
Ref: 206/306 1 module L/ZH
6 modules L/SH
2 modules L/UH



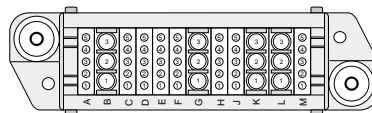
Ref: 215/315 4 modules L/ZH
5 modules L/UH



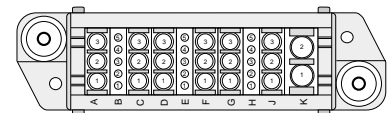
Ref: 225/325 4 modules L/ZH
4 modules L/SH
2 modules L/UH



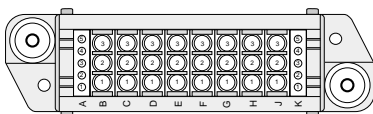
Ref: 207/307 8 modules L/ZH
4 modules L/SH



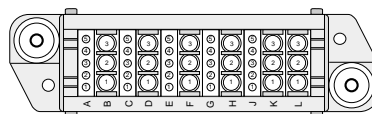
Ref: 216/316 8 modules L/ZH
4 modules L/SH



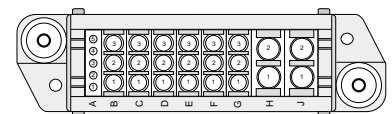
Ref: 226/326 3 modules L/ZH
6 modules L/SH
1 module L/UH



Ref: 208/308 2 modules L/ZH
8 modules L/SH



Ref: 217/317 5 modules L/ZH
6 modules L/SH



Ref: 227/327 1 module L/ZH
6 modules L/SH
2 modules L/UH

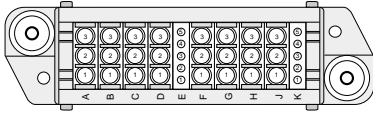
Notes

Only receptacle layouts are represented
Termination side view

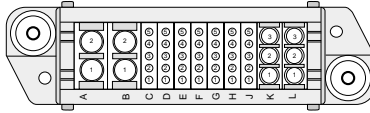
Dimensions are in mm

Layouts

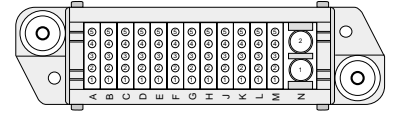
Layouts including Ø 1.50 mm contacts are equipped with L/ZH modules.



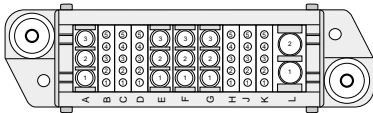
Ref: 229/329 2 modules L/ZH
8 modules L/SH



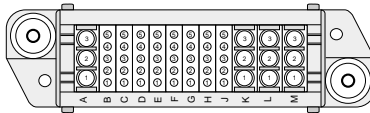
Ref: 237/337 7 modules L/ZH
2 modules L/SH
2 modules L/UH



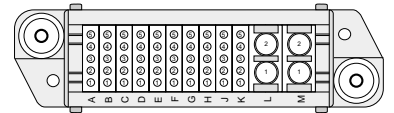
Ref: 246/346 12 modules L/ZH
11 module L/UH



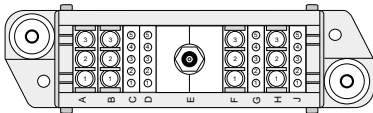
Ref: 230/330 6 modules L/ZH
4 modules L/SH
1 module L/UH



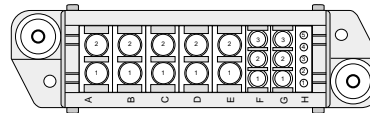
Ref: 238/338 8 modules L/ZH
4 modules L/SH



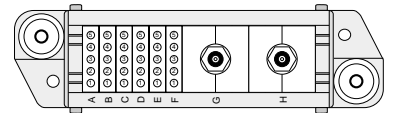
Ref: 247/347 10 modules L/ZH
12 modules L/UH



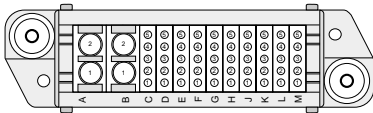
Ref: 231/331 4 modules L/ZH
4 modules L/SH
1 module L/V-



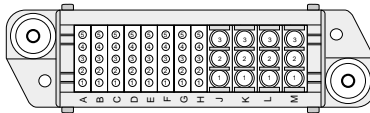
Ref: 239/339 1 module L/ZH
2 modules L/SH
5 modules L/UH



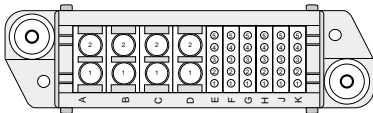
Ref: 250/350 6 modules L/ZH
2 modules L/V-



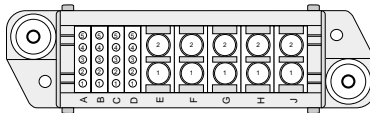
Ref: 232/332 10 modules L/ZH
2 modules L/UH



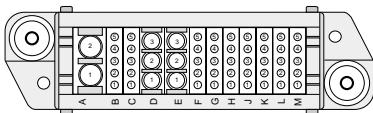
Ref: 240/340 8 modules L/ZH
4 modules L/SH



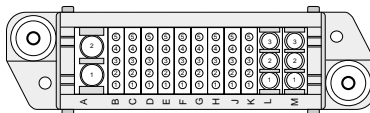
Ref: 233/333 6 modules L/ZH
4 modules L/UH



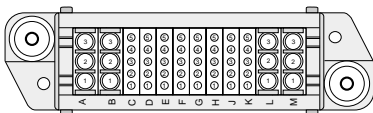
Ref: 241/341 4 modules L/ZH
5 modules L/UH



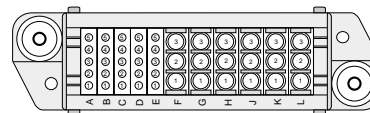
Ref: 234/334 9 modules L/ZH
2 modules L/SH
1 module L/UH



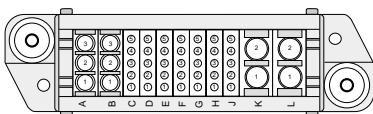
Ref: 242/342 9 modules L/ZH
2 modules L/SH
1 module L/UH



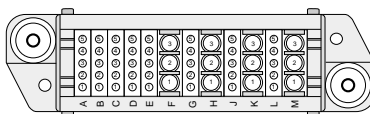
Ref: 235/335 8 modules L/ZH
4 modules L/SH



Ref: 243/343 5 modules L/ZH
6 modules L/SH



Ref: 236/336 7 modules L/ZH
2 modules L/SH
2 modules L/UH



Ref: 245/345 8 modules L/ZH
4 modules L/SH

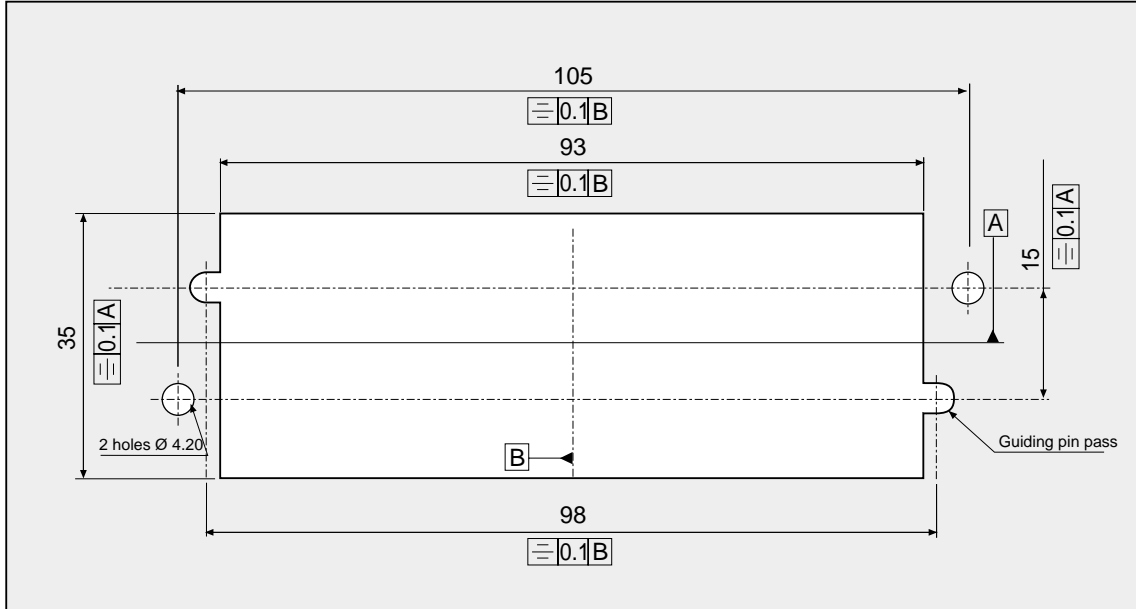
Notes

Only receptacle layouts are represented termination side view

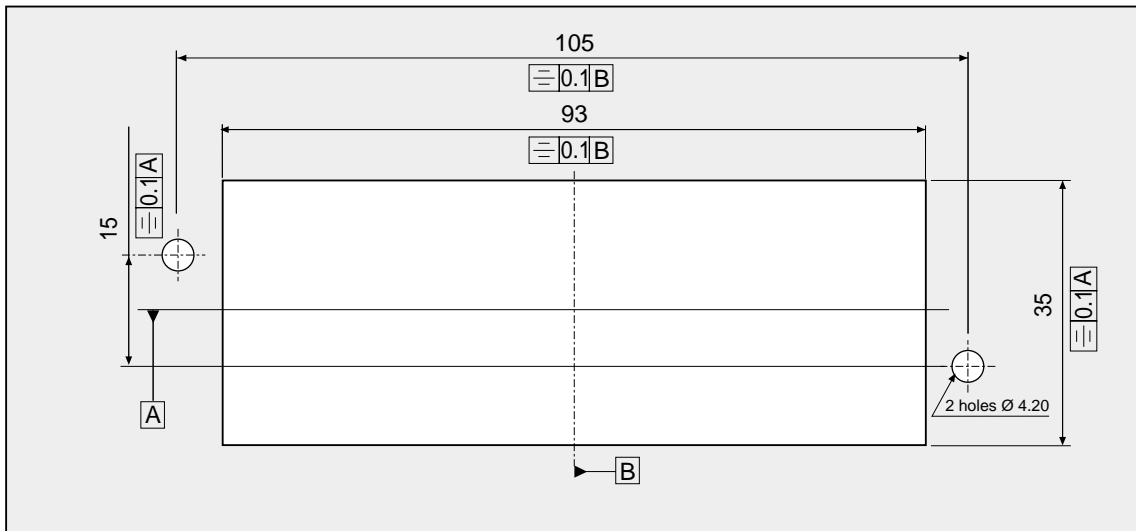
Dimensions are in mm

Panel cut-out

Receptacle panel cutting



Plug panel cutting



Dimensions are in mm

Crimping tools

Contact part number	Crimp tool	AWG	Wire cross section	Positioner	Tool turret	Selector position			
0150 682-20-G1 0150 761-20-OG	ASTRO TOOL TGV 101	24	0.22	SS.015000002 HYPERTAC	ASTRO TOOL	2			
		22	0.34			3			
		20	0.60			4			
		18	0.93			5			
		16	1.34			6			
		14	1.91			7			
		DANIELS FT8	24			0.22	DANIELS	2	
	22		0.34		3				
	20		0.60		4				
	18		0.93		SH 463 red	5			
	16		1.34		6				
	14		1.91		7				
	ASTRO TOOL MS 3191/1		22		0.34	Without			
		20	0.60						
		18	0.93						
16		1.34							
14		1.91							
0250 181-22-OG 0250 172-22-G1		ASTRO TOOL TGV 101	16	1.34	ASTRO TOOL				6
			15	1.50					6
	15		1.82	7					
	14		1.91	TGV 202 blue		7			
	14		2.00	7					
	DANIELS FT8	16	1.34	DANIELS	6				
		15	1.5	6					
		15	1.82	7					
		14	1.91	SH 463 blue	7				
		14	2.00	7					
0250 201-23-OG 0250 202-23-G1	ASTRO TOOL TGV 101	22	0.34	ASTRO TOOL	5				
		20	0.60		6				
		18	0.93		6				
		18	1.00		TGV 202 blue	6			
		16	1.34		6				
	DANIELS FT8	22	0.34	DANIELS	5				
		20	0.60	6					
		18	0.93	6					
		18	1.00	SH 463 blue	6				
		16	1.34	6					
0350 111-24-OG 0350 112-24-G1	DANIELS M317	14	1.91	DANIELS TP 805	3				
		14	2.00		3				
		13	2.50		4				
	ASTRO TOOL TGV 515	14	1.91	Without	ASTRO TOOL TGV 503	3			
		14	2.00			3			
		13	2.50			4			
0350 121-25-OG 0350 122-25-G1	DANIELS M317	16	1.34	DANIELS TP 805	2				
		15	1.50		2				
		14	1.91		3				
	ASTRO TOOL TGV 515	16	1.34	Without	ASTRO TOOL TGV 503	2			
		15	1.50			2			
		14	1.91			3			
0350 131-26-OG 0350 132-26-G1	DANIELS M317	22	0.38	DANIELS TP 805	1				
		20	0.60		1				
		18	0.93		2				
		18	1.00		2				
	ASTRO TOOL TGV 515	22	0.38	Without	ASTRO TOOL TGV 503	1			
		20	0.60			1			
18		0.93	2						
18		1.00	2						
0350 251-23-OG 0350 302-23-G1	ASTRO TOOL TGV 515	8	8.98	M22520/1,05	4				
	DANIELS M300 BT	8	8.98	M22520/1,05	4				

Dimensions are in mm

Tools - Insertion and extraction tools

Contact Ø	MALES		FEMALES	
	Part number	Part number	Insertion tool	Extracting tool
1.50	0150 761-20-OG	0150 682-20-G1	S_059 ⁽¹⁾	S__072
			SM-0150000002 ⁽²⁾	
			SM-0150000003 ⁽³⁾	
			SM-0150000000 ⁽⁴⁾	
2.50	0250 181-22-OG	0250 172-22-G1	SE-0250000001	S__078
	0250 201-23-OG	0250 202-23-G1		
3.50	0350 111-24-OG	0350 112-24-G1	SE-0350000001	S__083 ⁽⁵⁾
	0350 121-25-OG	0350 122-25-G1		
	0350 131-26-OG	0350 132-26-G1		
	0350 251-23-OG	0350 302-23-G1		

(1) straight tool

(2) unwedge tool

(3) bent tool

(4) 3 tool kit

(5) tool for Ø 1.50, 2.50 et 3.50 contacts